

SECTION 07143
CCW-MIRASEAL @ 120 mil thickness
REINFORCED LIQUID-APPLIED WATERPROOFING

PART 1 - GENERAL

1.1 SECTION INCLUDES:

Installation of waterproofing membrane on surfaces indicated on drawings, consisting of preparation of existing and repaired concrete surfaces, sealing of cracks and joints, and application of CCW-MIRASEAL @ 120 mils thick Reinforced Liquid-Applied Waterproofing Membrane.

1.2 RELATED SECTIONS

- A. Section 03150 - Expansion Joints.
- B. Section 03300 - Cast-In-Place Concrete.
- C. Section 07900 - Caulking and Sealants.
- D. Division 15 - Floor Drains and Standpipes.
- E. Division 16 - Conduit and other Electrical.

1.3 REFERENCES

ASTM C 836 100% Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for use with Separate Wearing Course.

1.4 SYSTEM DESCRIPTION

Product provided by this Section is a coal-tar and solvent-free, single component, elastomeric liquid designed to create a seamless reinforced waterproofing membrane at 120 mil thickness.

1.5 SUBMITTALS

- A. General: Submit in accordance with Section 01300.
- B. Product Data: Submit manufacturer's product literature and installation instructions.
- C. Subcontractor's approval by Manufacturer: Submit document stating manufacturer's acceptance of subcontractor as an Approved Applicator for the specified materials.
- D. Warranty: Submit a sample warranty identifying the terms and conditions stated in Section 1.7.

1.6 QUALITY ASSURANCE

- A. Applicator Qualifications: Applicator shall be experienced in applying the same or similar materials and shall be specifically approved in writing by the membrane system manufacturer.
- B. Pre-Application Conference: Prior to beginning work, convene a conference to review conditions, installation procedures, schedules and coordination with other work.

1.7 WARRANTY

Upon completion and acceptance of the work required by this section, the manufacturer will issue a warranty agreeing to promptly replace defective materials.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in original, factory-sealed, unopened containers bearing manufacturer's name and label intact and legible with following information.
 - 1. Name of material.
 - 2. Manufacturer's stock number and date of manufacture.
 - 3. Material safety data sheet.
- B. Recommended storage and application temperature is 75 degrees F. Store materials in protected and well ventilated area.

1.9 PROJECT CONDITIONS

- A. Do not apply membrane if temperature is less than 40 degrees F., if precipitation is imminent or the surface is wet or has frost. Substrate may be saturated surface dry.
- B. Coordinate waterproofing work with other trades to ensure adequate illumination, ventilation, and dust-free environment during application and curing of membrane. The applicator shall have sole right of access to the specified areas for the time needed to complete the application and allow the membrane to cure adequately.
- C. Protect adjoining surfaces not to be coated against damage or soiling. Protect plants, vegetation and animals which might be affected by waterproofing operations.
- D. Warn personnel against breathing of vapors and contact of material with skin or eyes. Wear applicable protective clothing and respiratory protection gear.
- E. Maintain work area in a neat and orderly condition, removing empty containers, rags, and rubbish daily from the site.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND DISTRIBUTORS

Provide CCW-MIRASEAL Reinforced Liquid Applied Waterproofing Membrane at 120 mil thickness as supplied by Carlisle Coatings and Waterproofing Incorporated, 900 Hensley Lane, Wylie, Texas 78098, Phone: (800) 527-7092 Fax: (972) 442-0076; Distributed by: Bowman Construction Supply, 10801 E. 54th Avenue, Denver, CO 80239; Phone: (303) 696-8960

2.2 PRODUCTS

- A. Waterproofing membrane shall be CCW-MIRASEAL for horizontal surfaces applied at 60 mils for each coat, reinforced by CCW LiquiFiber reinforcing fabric between coats and CCW-MIRASEAL for vertical surfaces applied at 60 mils for each coat, reinforced by CCW LiquiFiber reinforcing fabric between coats and shall meet or exceed the requirements of ASTM C 836.

2.3 ACCESSORY PRODUCTS

- A. Surface Primer: is not required for concrete or wood all other surfaces as recommended by manufacturer for each surface encountered.
- B. Sealants: Shall be CCW-201 two-component Polyurethane Sealant.
- C. Backing Rod: Shall be closed-cell polyethylene foam rod.
- D. Flexible Flashing: Shall be as recommended and supplied by coating manufacturer.
- E. Protection Course: Shall be CCW Protection Board-H/HS for horizontal surfaces or CCW Protection Board-V for vertical surfaces.
- F. Drainage Composite: Shall be CCW MiraDrain™ as recommended by the manufacturer for each condition.
- G. Perimeter Drainage System: Where required shall be CCW Quick DRAIN.
- H. Reinforcing: Shall be CCW LiquiFiber reinforcing fabric.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Before any waterproofing work is started the waterproofing applicator shall thoroughly examine all surfaces for any deficiencies. Should any deficiencies exist, the architect, owner, or general contractor shall be notified in writing and corrections made.
- B. Condition of Concrete Surfaces:
 - 1. The concrete surfaces shall be of sound structural grade, minimum of 2500 PSI compressive strength, and shall have a wood float or fine broom finish, free of fins, ridges, voids or entrained air holes.
 - 2. Concrete shall be cured by water curing method. Curing compounds must be of the pure sodium silicate type and be approved by the Carlisle representative.
 - 3. Concrete shall be cured at least three (3) days and shall be sloped for proper drainage.
 - 4. Control joints and/or expansion joints shall have been properly installed at strategic points throughout the field of the deck to control cracking caused by deflection and shrinkage.
 - 5. Any required crickets or drains should be installed at the time the main deck is poured. Deck should be monolithic.
 - 6. Voids, rock pockets and excessively rough surfaces shall be repaired with approved non-shrink grout or ground to match the unrepaired areas.
 - 7. Two-stage drains shall have a minimum 3" flange and be installed with the flange flush and level with the concrete surface.
 - 8. Surfaces at cold joints shall be on the same plane.

3.2 SURFACE PREPARATION

- A. The concrete surface must be thoroughly clean, dry and free from any surface contaminates or cleaning residue that may harmfully affect the adhesion of the membrane.
- B. Install a 1" face, 45 degree cant of CCW-201 polyurethane sealant at all angle changes and inside corners including projections through the deck, walls, curbs, bumpers, etc.

- C. All cracks over 1/16" in width and all moving cracks under 1/16" in width shall be saw cut to 1/4" minimum in width and depth. Saw cut a 1/4" by 1/4" kerf around drain flanges. Clean, prime and fill saw cuts flush with CCW-201 polyurethane sealant.
- D. All moving cracks over 1/16" wide and all expansion joints less than 1" wide shall be cleaned, primed, fitted with a backing rod and caulked with CCW-201 polyurethane sealant. For larger joints, contact Carlisle representative.
- E. Allow all sealant to cure thoroughly.
- F. Apply a 6" wide, 45 mils thick stripe-coat of CCW-MIRASEAL centered over all sealed cracks, hairline cracks, joints, and outside corners.
- G. Apply a 45 mil thick stripe-coat of CCW-MIRASEAL over sealant cants and extending 4" onto the horizontal deck and up the vertical wall to the height called out on the drawings (minimum 8" recommended).
- H. Allow all detail work to cure overnight.
- I. All required metal shall be installed at this time. Apply a stripe coat of CCW-MIRASEAL, 45 mils thick, 6" wide, centered over all transitions from concrete to metal flashings and reinforce with CCW LiquiFiber reinforcing fabric. Allow the stripe coat to cure a minimum of three (3) hours to a firm consistency.

3.3 APPLICATION

- A. Priming: Primer is not required for adhesion to dry surfaces, non-porous concrete or wood. Consult CCW for other substrates.
- B. Apply the CCW-MIRASEAL in one uniform coat at the rate of one gallon minimum per 25 square feet or as needed in order to obtain a minimum thickness of 60 wet mils, including coverage of detail work. Use a 1/4-inch notch squeegee to achieve a uniform thickness, then back roll to smooth coating.
- C. Immediately install Carlisle's CCW LiquiFiber reinforcing fabric working the fabric into the wet CCW-MIRASEAL until fabric is saturated, avoiding trapped air, wrinkles and fishmouths. Cut and lay flat wrinkles and fishmouths.
- D. In the event the entire surface is not completed in one day and becomes contaminated, prior to beginning application clean an area 6" wide along the edge of the previously applied membrane with a cloth wet with xylene solvent. New work shall overlap the existing work by 6".
- E. Allow the first coat of CCW-MIRASEAL to cure three (3) hours minimum to a firm consistency.
- F. Apply the second coat of CCW-MIRASEAL at 25 sf/gallon in a uniform consistency of 60 mils over the first coat of CCW-MIRASEAL. Cover the CCW LiquiFiber reinforcing fabric for complete encapsulation.

3.4 FLOOD TEST

- A. Allow CCW-MIRASEAL Membrane to cure for at least 24 hours. Plug drains and provide barriers necessary to contain flood water.
- B. Flood surface with 1" head of water for 24 hours. Inspect for leaks and repair membrane if leaks are found. Retest after making repairs.

3.5 PROTECTION COURSE

Install Mira-Drain Drainage Composite and CCW Protection Board-H/HS Protection Course immediately after flood testing on horizontal surfaces. If flood testing is delayed, install a temporary covering to protect the CCW-MIRASEAL membrane from damage by other trades.

End of Section

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